

## **REMARKS**

Claims 1-37 are pending in the application and stand rejected. This amendment is being submitted in response to the new grounds of rejection asserted in the Office Action of June 15, 2005, which was issued in response to Applicant's Appeal Brief to thereby reopen prosecution. Applicant reserves the right to subsequently recommence an Appeal in this application while applying previously paid appeal fees. Applicant respectfully requests reconsideration of the claim rejections based on the following remarks.

### **Claim Rejections - 35 U.S.C. § 102**

Claims 1-37 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,778,177 to Azar. Moreover, Claims 1-37 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,275,449 to Aish. Applicant respectfully submits that at the very least, neither Azar nor Aish discloses or suggests the inventions of claims 1, 15 or 27.

For instance, with respect to claim 1, neither Azar nor Aish discloses or suggests, e.g., *a tracking system for generating tracker data associated with a given component part, much less a CAD application that processes the tracker data to generate a CAD representation of the given component part and to determine the position and orientation of the given component part with respect to the physical model before and after the given component part is placed in a desired position in the physical model.*

Similary, with respect to claims 15 and 27, neither Azar nor Aish discloses or suggests, e.g., *tracking coordinates of the relevant points of the CAD representation of the component physical part in relation to coordinates of the CAD model before and*

*after the physical component part is placed in a desired position in the physical model.*

Indeed, fundamentally, AZAR does not even disclose means for tracking the position and orientation of a scanned physical object, much less tracking the position and orientation of the scanned object with respect to a physical model as the scanned object is placed in a physical model. Although the CAD program (13b) of AZAR processes captured geometric information of a physical object to generate a virtual image of the object, it is abundantly clear that the AZAR system does not include a tracking system that generates tracking data used by the CAD application determine the position and orientation of the physical object with respect to a physical model. In fact, there is simply no teaching in AZAR of building a physical model.

In particular, AZAR discloses a scanning device to scan an object and capture geometric information, i.e., the dimensions of an object or topology of a surface, which is used to generate a computer (virtual) image of the object. The CAD program (13b) enables interactive display and manipulation of the scanned (virtual) object or surface on a display unit (14) via the input devices (11). However, it is clear that there is nothing in AZAR that even remotely teaches that the CAD program (13b) processes such captured geometric information to determine the position and orientation of the component part with respect to the physical model, or otherwise track the coordinates of the relevant points of the CAD representation of the component physical part in relation to coordinates of the CAD model, both before and after the component part is placed in a desired position in the physical model. In short, although AZAR may arguably disclose that the CAD program (13b) can track the position and orientation of the virtual object (image) in

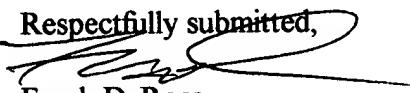
the model (virtual) space as the image is manipulated in image space on the image display,  
this does not teach or suggest tracking the position and orientation of a physical object as  
it is placed in the physical model.

Aish discloses (in FIG. 1, for example) a modeling system comprising a  
baseboard (10), a control console (20), and a collection of model elements (30, 40) that  
can be assembled to each other. The model elements (e.g., element 30) can be plugged  
into the baseboard (10) and to other model elements to build a physical model. The base  
board (10) includes a plurality of similar electrical connector-part sets (11) which also  
provide mechanical location. The connector sets (11) are connected to a wiring layout  
(12) providing several parallel connector runs and extending to a multiway connector and  
cable (13). The multiway cable extends to the control console (20). The individual  
modeling elements such as 30, 40 are provided with plugs (31) and (32), for example, on  
surfaces thereof, wherein the plugs (31) are compatible with the connector-part sets (11)  
of the base board (10). Each set (11) has an associated electric circuit module (14) is to  
provide to the control console (20) an indication that an element is connected at the  
respective position (11) on the base board (10) and to form a path through which  
information passes to and from the modeling elements. Each model element has an internal  
module or modules 33, 34. In use, the elements are assembled by plugging one into  
another to build a desired model. The assembled elements are then interrogated by suitable  
electronic control means over their plug connections to determine the arrangement of the  
modeling elements. The interengaged elements provide a linked information transfer  
network to transfer information that indicates the arrangement of the interengaged

elements, which is used to determine the physical properties of the desired constructional form as a whole (see, Col. 3, line 20 – Col. 4 line 60).

Although Aish arguably discloses forming a physical model of constituent component parts, Aish does not disclose a tracking system or method to determine the position and orientation of the component part with respect to the physical model, or otherwise track the coordinates of the relevant points of the CAD representation of the component physical part in relation to coordinates of the CAD model, both before and after the component part is placed in a desired position in the physical model. At most, Aish arguably discloses a system where the position (XYZ) of a component part in the physical model can be determined only after the component part is connected to another model component or the baseboard (10). In short, Aish does not disclose or suggest a tracking system or method as claimed in claims 1, 15 or 27.

Accordingly, claims 1, 15 and 27 are clearly patentably distinct and patentable over Azar and Aish. Further, all claims that depend from claims 1, 15 and 27 are patentably distinct and patentable over Azar and Aish at least by virtue of their dependence from respective base claims 1, 15 and 27 (although such claims are indeed patentable in their own right). Accordingly, withdrawal of the anticipation rejections is requested.

Respectfully submitted,  
  
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